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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/769,583	01/30/2004	Richard Golasky	016295.1530 (DC-05847)	8586
23640 7590 12/20/2006 BAKER BOTTS, LLP 910 LOUISIANA HOUSTON, TX 77002-4995			EXAMINER LE, DIEU MINH T	
			ART UNIT 2114	PAPER NUMBER
SHORTENED STATUTORY PERIOD OF RESPONSE		MAIL DATE	DELIVERY MODE	
3 MONTHS		12/20/2006	PAPER	

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/769,583

Applicant(s)

GOLASKY ET AL.

Examiner

Dieu-Minh Le

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 October 2006.
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1-21 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☒ The drawing(s) filed on 31 January 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. This Office Action is in response to the amendment filed 10/06/2006 in application 10/769,583.

2. Claims 1-21 are again presented for examination.

3. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Applicant's arguments filed 10/06/2006 with respect to Claims 1-21 under 35 U.S.C. 103(a) as being unpatentable over Deitz et al in view of Matsunami et al. have been fully considered but they are not persuasive.

4. Claims 1-21 are again rejected under 35 U.S.C. 103(a) as being unpatentable over Deitz et al. (U.S. 6,578,158 hereafter referred to as Deitz) in view of Matsunami et al. (U.S. 7,003,687 hereafter referred to as Matsunnami).

This rejection is being applied for the same reasons set forth in the previous Office Action mailed 10/06/2006.

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As per claims 1-21 see the previous office action for the detailed teaching of Deitz and Matsunami as well as the motivation and reasons for combined.

Applicant asserts that Deitz and Matsunami failed to teach or suggest the following:

- A. marking a point in the information exchange at which the failure event occurred;
- B. retrieve an exchange status indicating a point in the exchange at which the failure event occurred;
- C. an information handling system comprising a program of instructions "operable to mark a point of failure in an information exchange with a sequential storage device in response to a communication path failure".

Examiner respectfully transverses Applicant's argument as follows:

- A. First, Examiner would like to bring Applicant attention to Deitz's method and apparatus for providing a RAID controller having transparent fail-over and fail-back [abstract, fig.1-3,

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col. 3, lines 3-25]. Deitz clearly demonstrated **the data storage fail-over via a multi-path fail-over recovery (i.e., error detection and correction process)** [col. 4, lines 44 through col. 5, lines 32]. In addition, Matsunami explicitly illustrated the fail-over storage system [abstract, fig. 1-6, col. 1, lines 25-30] comprising **means for monitoring the system states and marking a heartbeat in supporting the fail-over process** within **multi storage data units** [col. 3, lines 3-28 and col. 14, lines 7-29]. It is clear that both Deitz and Matsunami do teach applicant's invention.

Second, it is **not** true that both Deitz and Matsunami failed to teach "marking a point in the information exchange at which the failure event occurred". Deitz explicitly disclosed the **capabilities of failure detection via polling and pinging schemes including re-intialization and looping** [col. 9, lines 40 through col. 10, lines 12]. Deitz further illustrated the unique identifier used for memory data survivability [col. 9, lines 40-52]. Therefore, it is obvious to a person having ordinary skill in the art to realize that Deitz's above capabilities must have applied such "marking a point..." feature as claimed by applicant in order to performing time-stamp process in supporting the memory fail-over functionality.

Third, Matsunami's fail-over storage system [abstract, fig. 1-6, col. 1, lines 25-30] does clearly teach applicant's limitation. Matsunami illustrated means for monitoring the system states and marking a heartbeat in supporting the fail-over process [col. 14, lines 7-29]. Matsunami further demonstrated the monitor failure occurrence by using a fail-over control program [col. 7, lines 8-10], a predetermined updating time feature used for marking such information in supporting memory failure recover process [col. 7, lines 38 through col. 8, lines 7]. Therefore, it would have been obvious to an ordinary skill in the art to realize that Matsunami's monitor failure occurrence functionality does perform such data marking in response to memory failure recovery.

Fourth, as indicate in previous office action that the combination of Deitz and Matsunami do teach applicant's invention. Moreover, it would have been obvious to a person having ordinary skill in the art at the time of Applicant's invention to first realizing Dietz's **failback and resume operations used to support failover process including identifying data (i.e., state data), preventing data loss, resetting signal, etc** ...as being the marking a point in the

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information exchange at which the failure event occurred as claimed by Applicant. This is because Dietz performed data operating system failure detection and recovery via data/error monitoring, detecting, and correcting processes (i.e., failover). By utilizing these capabilities, the communication path between the data storage device and information system (i.e., host/servers environment) can be directed or redirected promptly and functioned properly during failover switching process in supporting the network operation; second, by applying the means for monitoring the system states and marking a heartbeat in supporting the fail-over process as taught by Matsunami in conjunction with the method and apparatus for providing a RAID controller having transparent fail-over and fail-back as taught by Dietz, the multi-path communication networking system including backup capability (i.e., OS failover) can enhance its operation performance, more specifically to ensuring the error detected, corrected, and replaced (i.e., backup) in proper and efficient manner.

This modification would have been obvious because a person having ordinary skill in the art would have been motivated to do so to improve the system operation availability and network/system performance therein with a mechanism to enhance the data connectivity, data debugging, data reliability, and

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data throughput which eventually will increase its performance, such as data throughput between internal and external devices.

B. This limitation is similar to the limitation as described in paragraph A above since it is related to the "marking or indicating a point in the exchange at which the failure event occurred"; Therefore, same rationale as described in paragraph 2.1 is applied to this limitation. In addition Deitz explicitly illustrated a firmware (i.e., hardware and software) operated to retrieve information (i.e., retrieve an exchange status indicating a point in the exchange at which the failure event occurred as claimed by applicant) in supporting RAID failure recovery process [col. 5, lines 55-57 and col. 6, lines 19-34].

C. This limitation is similar to the limitation as described in paragraph A above since it is related to the "marking or operable to mark a point of failure in an information exchange with a sequential storage device in response to a communication path failure"; Therefore, same rationale as described in paragraph A above is applied to this limitation. In addition Deitz explicitly illustrated a memory system for transferring data between data storage system and host computer in response to instructions (i.e., an information handling system comprising

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a program of instructions as claimed by application) via its unique identifier in supporting the memory fail-over process [col. 12, lines 41-52].

Applicant's arguments filed 10/06/2006 with respect to claims 1, 9, and 15 under 35 U.S.C. 102(e) as being anticipated by U.S. Patent No. 6,625,747 issued to Ahmad H. Tawil et al. have been fully considered and are persuasive. The 35 U.S.C. 102(e) has been withdrawn.

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 C.F.R. § 1.136(a).

A SHORTENED STATUTORY PERIOD FOR RESPONSE TO THIS FINAL ACTION IS SET TO EXPIRE THREE MONTHS FROM THE DATE OF THIS ACTION. IN THE EVENT A FIRST RESPONSE IS FILED WITHIN TWO MONTHS OF THE MAILING DATE OF THIS FINAL ACTION AND THE ADVISORY ACTION IS NOT MAILED UNTIL AFTER THE END OF THE THREE-MONTH SHORTENED STATUTORY PERIOD, THEN THE SHORTENED STATUTORY PERIOD WILL EXPIRE ON THE DATE THE ADVISORY ACTION IS MAILED, AND ANY EXTENSION FEE PURSUANT TO 37 C.F.R. § 1.136(a) WILL BE CALCULATED FROM THE MAILING DATE OF THE ADVISORY ACTION. IN NO EVENT WILL THE STATUTORY PERIOD FOR RESPONSE EXPIRE LATER THAN SIX MONTHS FROM THE DATE OF THIS FINAL ACTION.

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dieu-Minh Le whose telephone number is (571) 272-3660. The examiner can normally be reached on Monday - Thursday from 8:30 AM to 6:00 PM.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Scott Baderman can be reached on (571)272-3644.

The Tech Center 2100 phone number is (571) 272-2100.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



DIEU-MINH THAI LE
PRIMARY EXAMINER
ART UNIT 2114

DML

12/16 /06